a low carrier concentration layer provided on the side of said current blocking layer between said first cladding layer and said current blocking layer and having a lower carrier concentration than said current blocking layer; and

a depletion enhancement layer provided on the side of said first cladding layer between said first cladding layer and said current blocking layer for inhibiting storage of carriers in said low carrier concentration layer,

the thickness of the depletion enhancement layer is at least 10 nm.

A1 cont.

2. (Amended) The semiconductor laser device according to claim 1, wherein

the band gap of said first cladding layer is larger than that of said depletion enhancement layer, and the band gap of said depletion enhancement layer is larger than that of said low carrier concentration layer.

3. (Amended) The semiconductor laser device according to claim 1, wherein

said first cladding layer has a flat portion formed on said active layer and a ridge portion formed on a portion of said flat portion in said current injection region,

said depletion enhancement layer is provided on said flat portion located on both sides of said ridge portion and on the side surfaces of said ridge portion, and

said low carrier concentration layer and said current blocking layer are successively formed on said depletion enhancement layer.

a2 5. (Amended) The semiconductor laser device according to claim 3, wherein the thickness of said depletion enhancement layer is at least 15 nm.

7. (Amended) A semiconductor laser device comprising:

an active layer;

a3 a first cladding layer of a first conduction type provided on said active layer;

a current blocking layer of a second conduction type provided on said first cladding layer except a current injection region;

a low carrier concentration layer provided on the side of said current blocking layer between said first cladding layer and said current blocking layer and having a lower carrier concentration than said current blocking layer; and

a depletion enhancement layer provided on the side of said first cladding layer between said first cladding layer and said current blocking layer for inhibiting storage of carriers in said low carrier concentration layer, wherein

said depletion enhancement layer, said low carrier concentration layer and said current blocking layer are successively formed on said first cladding layer except said current injection region,

said semiconductor laser device further comprising a second cladding layer of a first conduction type provided to fill up a space enclosed with the side surfaces of said depletion

A3 Cont.

enhancement layer, said low carrier concentration layer and said current blocking layer and the upper surface of said first cladding layer in said current injection region.

17. (Amended) A semiconductor laser device comprising:

an active layer;

a first cladding layer of a first conduction type provided on said active layer;

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a first current blocking layer provided on said first cladding layer except a current injection region, said first current blocking layer having a carrier concentration;

a second current blocking layer of a second conduction type provided on said first current blocking layer, said second current blocking layer having a carrier concentration; and

a depletion enhancement layer formed between said first cladding layer and said first current blocking layer for inhibiting storage of carriers in said first current blocking layer, wherein

said depletion enhancement layer has a thickness of at least 10 nm, and has an energy level in band gap supplying second conduction type carriers to compensate for first conduction type carriers supplied from said first cladding layer due to a modulation doping effect; and further wherein

the first current blocking layer has a lower carrier concentration than the second current blocking layer.

24. (Amended) The semiconductor laser device according to claim 17, wherein

said first cladding layer has a flat portion formed on said active layer and a ridge portion formed on a portion of said flat portion in said current injection region,

said depletion enhancement layer is provided on said flat portion located on both sides of said ridge portion and on the side surfaces of said ridge portion, and

said first current blocking layer is formed on said depletion enhancement layer.